

Claims

1. An image processing apparatus for generating a wide-angle picture by overlapping a first picture captured from a first visual point and a second picture, including a part of the first picture, captured from a second visual point different from the first visual point so that said parts are overlapped, said image processing apparatus is characterized by comprising:

detecting means of detecting an overlap portion of the first picture with the second picture within the wide-angle picture;

comparing means of comparing pixel values between pixels of the first and the second pictures in the overlap portion; and

splicing means of performing a splicing by shifting the overlap portion of the first picture with the second picture in correspondence with a result of the comparison by the comparing means.

2. The image processing apparatus as cited in claim 1, characterized by further comprising:

difference calculating means of calculating absolute values of differences in pixel values between the first and the second picture pixels identical in position on the wide-angle pictures in the overlap portion, wherein

the comparing means compares the pixel values between the pixels of the first and the second pictures in the overlap portion by comparing the absolute values, calculated by the difference calculating means, of the differences in pixel values between the first and the second picture pixels identical in position on the wide-angle pictures in the overlap

portion with a prescribed threshold.

3. The image processing apparatus as cited in claim 2, characterized by further comprising:

5 logarithm transformation means of performing a logarithm transformation of the absolute values of the differences in pixel values between the first and the second picture pixels identical in position on the wide-angle pictures in the overlap portion, wherein

10 the comparing means compares the pixel values between the pixels of the first and the second pictures in the overlap portion by comparing a value obtained by the logarithm transformation means through the logarithm transformation of the absolute values of the differences in pixel values between

15 the first and the second picture pixels identical in position on the wide-angle pictures in the overlap portion with a predetermined threshold.

4. The image processing apparatus as cited in claim 1, characterized by further comprising:

20 median detecting means of calculating medians within the absolute values of the differences in pixel values between the first and the second picture pixels identical in position on the wide-angle pictures in the overlap portion, wherein

25 the comparing means compares the pixel values between the pixels of the first and the second pictures in the overlap portion by comparing the medians, detected by the median detecting means, within the absolute values of the differences in pixel values between the first and the second picture pixels

30 identical in position on the wide-angle pictures in the overlap portion with a prescribed threshold.

5. The image processing apparatus as cited in claim 1, characterized by further comprising:

edge extracting means of extracting edges from the first
5 and the second pictures, wherein

the comparing means compares the pixel values between the pixels of the first and the second pictures in the overlap portion by comparing the edges, extracted by the edge extracting means, of the first and the second pictures in the
10 overlap portion.

6. An image processing method of an image processing apparatus for generating a wide-angle picture by overlapping a first picture captured from a first visual point and a second
15 picture, including a part of the first picture, captured from a second visual point different from the first visual point so that said parts are overlapped, said image processing method comprising:

a detection step of detecting an overlap portion of a
20 first picture with a second picture within wide-angle pictures;

a comparison step of comparing pixel values between pixels of the first and the second pictures in the overlap portion; and

a splicing step of performing a splicing through a
25 shifting of the overlap portion of the first picture with the second picture in correspondence with a result of comparison obtained by a processing in the comparison step.

7. A recording medium characterized on which a program is
30 recorded in a computer readable form, wherein said program controls an image processing apparatus for generating a

wide-angle picture by overlapping a first picture captured from a first visual point and a second picture, including a part of the first picture, captured from a second visual point different from the first visual point so that said parts are overlapped, said program comprising:

a detection step of detecting an overlap portion of a first picture with a second picture within wide-angle pictures;

a comparison step of comparing pixel values between pixels of the first and the second pictures in the overlap portion; and

a splicing step of performing a splicing through a shifting of the overlap portion of the first picture with the second picture in correspondence with a result of comparison obtained by a processing in the comparison step.

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8. A program characterized by executing computer which controls an image processing apparatus for generating a wide-angle picture by overlapping a first picture captured from a first visual point and a second picture, including a part of the first picture, captured from a second visual point different from the first visual point so that said parts are overlapped, said computer executing:

a detection step of detecting an overlap portion of a first picture with a second picture within wide-angle pictures;

a comparison step of comparing pixel values between pixels of the first and the second pictures in the overlap portion; and

a splicing step of performing a splicing through a shifting of the overlap portion of the first picture with the second picture in correspondence with a result of comparison obtained by a processing in the comparison step.

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